



Course Syllabus: Therapeutic Modalities for the Athletic Trainer

Gunn College of Health and Human Services

ATRN 2904 Section 201

Spring 2026

Contact Information

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Course Description

The purpose of this course is to provide the prospective athletic trainer with the knowledge and skill necessary to apply and make clinical decisions in use therapeutic modalities for the health care of the physically active. Course will be offered as a hybrid with a combination of in class face to face sessions and zoom distance classes.

General Course Information

1. Prerequisites: a. ATRN 1074
2. Credit: Three semester hours
3. Intended Audience: ATRN majors
4. Days, Times, Place: MWF 9-9:50, D.L. Ligon, 219
5. Texts:
 - a. Starkey, Chad: Therapeutic Modalities, FA Davis, 4th ed., 2013

Course Objectives

Upon successful completion of this course students will be able to demonstrate the appropriate knowledge and skill base to understand the basic principles of:

1. Describe and differentiate the physiological and pathophysiological responses to inflammatory and non-inflammatory conditions and the influence of these responses on the design, implementation, and the progression of therapeutic interventions.

2. Compare and contrast current theories of pain perception and pain modulation as well as differentiate between palliative and acute and chronic pain control intervention.
3. Describe the psychosocial factors that affect persistent pain sensation and perception and identify multidisciplinary approaches for assisting patients with persistent pain
4. Determine the effectiveness and efficacy of an therapeutic intervention utilizing evidence-based practice concepts
5. Compare and contrast the physiological responses to injury and healing across the lifespan as well as the theory and principles relating to the expected physiological responses of a therapeutic intervention program.
6. Explain the principles of therapeutic modality intervention that are associated with the application of thermal, mechanical, electromagnetic, and acoustic energy to the body and how they relate to the development of therapeutic interventions
7. Integrate self-treatment into the interventions when appropriate, including instructing the patient regarding self-treatment plans.
8. Design therapeutic interventions to meet specified treatment goals including but not limited to indications, contraindications, precautions for the interventions; positioning and patient preparation for the intervention; describe the expected effects and potential adverse reactions to the patient; apply the intervention, using parameters appropriate to the intended outcome; reassess the patient to determine the immediate impact of the intervention.
9. Use the results of ongoing clinical examinations to determine when a therapeutic intervention should be progressed, regressed, or discontinued
10. Describe the relationship between the application of therapeutic modalities and the incorporation of active, passive exercise and/or manual therapies.
11. Inspect therapeutic equipment and the treatment environment for potential safety hazards and identify manufacturer, institutional, state, and/or federal standards that influence the approval, operation, inspection, maintenance, and safe application of therapeutic modalities.
12. Based on the comprehensive clinical examination of a patient establish overall treatment goals and implement a therapeutic intervention to target the treatment goals for that condition.
13. Integrate and interpret various forms of standardized documentation to recommend activity level, make return to play decisions and maximize patient

outcomes and progress in treatment plans for inflammatory or non-inflammatory conditions.

Tentative Course Schedule

Class	Topic	Reading
1/21	Course Introduction, Injury Response and Treatment Planning	Chapter 1
GAME DAY	Game day exam opens 1/21 6 AM, closes 1/30 11 PM	
1/23	Injury Response and Treatment Planning	Chapter 1
1/26	Physiology and Psychology of Pain— CHAPT 1 QUIZ	Chapter 2
1/28	Physiology and Psychology of Pain	Chapter 2
1/30	Development and Delivery of Intervention Strategies— CHAPT 2 QUIZ	Chapter 3
LAB	Insulating Mediums	Chapters 5-6
2/2	Development and Delivery of Intervention Strategies	Chapter 3
2/4	Development and Delivery of Intervention Strategies	Chapter 3
2/6	Administrative Considerations— CHAPT 3 QUIZ	Chapter 4
LAB	RICE immediate care	Chapters 5-6
2/9	Cryotherapy and Thermotherapy Evidence Based Therapeutic Modalities Project-selected	Chapter 5
2/11	Cryotherapy and Thermotherapy	Chapter 5
2/13	Cryotherapy and Thermotherapy-	Chapter 5
LAB	Cryotherapy, crykinetics, cryostretch	Chapter 5-6
EXAM	UNIT ONE EXAM (ONLINE Chapters 1-4) OPENS 2/13-CLOSES 2/15	
2/16	Cryotherapy and Thermotherapy	Chapter 5
2/18	Cryotherapy and Thermotherapy	Chapter 5
2/20	Cryotherapy and Thermotherapy—Application— CHAPT 5 QUIZ	Chapter 6
LAB	Paraffin bath, moist steam pack	
2/23	Cryotherapy and Thermotherapy—Application	Chapter 6
2/25	Cryotherapy and Thermotherapy—Application	Chapter 6
2/27	Therapeutic Ultrasound— CHAPT 6 QUIZ	Chapter 7
LAB	Ultrasound	
3/2	Therapeutic Ultrasound--	Chapter 7
3/4	Therapeutic Ultrasound-Application— CHAPT 7 QUIZ	Chapter 8
3/6	Therapeutic Ultrasound-Application	Chapter 8
LAB	Ultrasound	
3/9	NO CLASS SPRING BREAK	
3/11	NO CLASS SPRING BREAK	
3/13	NO CLASS SPRING BREAK	
3/16	Shortwave Diathermy--- CHAPT 8 QUIZ	Chapter 9
3/18	Shortwave Diathermy	Chapter 9
3/20	Shortwave Diathermy--Application— CHAPT 9 QUIZ	Chapter 10
EXAM	UNIT 2 EXAM Chapters 5-6 ONLINE Opens 3/20 Closes 3/22	
LAB	Shortwave Diathermy	
3/23	Principles of Electrical Stimulation	Chapter 11
3/25	Principles of Electrical Stimulation	Chapter 11

Class	Topic	Reading
3/27	Principles of Electrical Stimulation– Evidence Based Therapeutic modalities Project Due by 11 pm--	Chapter 11
LAB	Electrical Stimulation	
3/30	Electrical Stimulation techniques –	Chapter 12
4/1	Electrical Stimulation techniques --	Chapter 12
4/3	-- No Class Holiday Break	
4/6	Electrical Stimulation techniques – CHAPT 11 QUIZ	Chapter 12
LAB	Electrical Stimulation	
4/8	Clinical Application of Electrical Agents	Chapter 13
4/10	Clinical Application of Electrical Agents	Chapter 13
EXAM	UNIT THREE EXAM (ONLINE-chapters 7-10) OPENS 4/10-CLOSES 4/12	
4/13	Clinical Application of Electrical Agents	Chapter 13
LAB	Electrical Stimulation	
4/15	Intermittent Compression	Chapter 14
4/17	Intermittent Compression Chapt 13 Quiz	Chapter 14
4/20	Traction	Chapter 16
4/22	Traction	Chapter 16
4/24	Traction-- CHAPT 14 QUIZ	Chapter 16
4/27	Therapeutic Massage-- CHAPT 16 QUIZ	Chapter 17
LAB		
4/29	Therapeutic Massage	Chapter 17
5/1	Biofeedback-- CHAPT 17 QUIZ	Chapter 18
LAB	Traction/Intermittent Compression	
5/4	Biofeedback	Chapter 18
5/6	Low Level Laser Chapt 18 Quiz	Chapter 19
5/8	Low Level Laser	Chapter 19
LAB	Massage	Chapt 17
5/9-5/12	Final Exam—Chapts 11, 12, 13, 14, 16, 17?18? and frequently missed from Units 1-3	
ORAL Practical	Students will sign up with their partner from class and be tested on modality techniques learned during the semester. This testing will occur during finals week around the students other finals.	

Course Evaluation

1. Course Requirements:
 - a. Completion of chapter quizzes and unit written examinations covering material presented in the textbook, lectures, and references materials.
 - b. Regular attendance and participation in class discussion
 - c. Completion of the EBP assignment.
 - d. Completion of laboratory oral-practical
 - e. Completion of laboratory write ups
 - f. Completion of game day exam
 - g. Completion of Kahoot Discussions
2. Grading:

Assignments	Points
Chapter Quiz's (5-15 pts each)	80 to 160
Kahoots	10-15
Unit Exams 75 Pts each (3 x 75)	225
Evidence based project assignment	60
Final Exam	100
Lab Write ups	50-100
Lab Oral Practical Exam	100
Game Day Exam	100
Total Points	725 to 860

3. Grading Scale:

Grade	Points
A	90 to 100% of total points
B	80 to 89% of total points
C	70 to 79% of total points
D	60 to 69% of total points
F	Less than 60 % of total points

Chapter Quizzes

There will be an online quiz the next class period after the completion the lectures on that chapter. Each quiz will be from 5-15 points in length. All material for the quizzes will come entirely from assigned readings. **Please note all quizzes will be given through the lock down browser in D2L. Please read the instruction sheet on lock down browser before starting a quiz (located in the syllabus tab)**

Evidence Based Practice Assignment

As a future clinician it is important that you learn to practice in an evidence-based manner. As such the Evidence Based Practice project will involve you researching a clinical question to determine the efficacy of various therapeutic interventions. Criteria for the project and information on selection of the clinical questions will be presented in class and on D2L.

Zoom Lectures

There will be prerecorded zoom lecture that correspond to lab days. The recorded lectures will serve to continue the lecture presentation that would have occurred during lab periods. It is the student's responsibility to view these in a timely manner. The recorded material will be part of all exams, Kahoots, and chapter quizzes.

Kahoot Discussion

There will be random Kahoot discussion questions during class sessions. The questions will come from assigned readings and presented lectures and serve to enhance a student's learning and provoke discussions. Students should access the Kahoot platform either online or through the Kahoot App. Here is the link for the app: <https://kahoot.com/home/mobile-app/> Student will receive points for being present and answering the questions as well as points for correct answers

Laboratory Write Ups

There will be ongoing class discussions related to the material currently being presented in class. Students will earn 5-10 points per discussion. Student must be present in class and participate in the discussion in order to earn the

Oral Practical Exam

There will be ongoing class discussions related to the material currently being presented in class. Students will earn 5-10 points per discussion. Student must be present in class and participate in the discussion in order to earn the

Exams

There will be three unit exams as listed on the course syllabus. These exams will be given through D2L learning platform and are timed. The exams will cover the specific material listed in the course schedule and are multiple choice, true false type of questions. **Please note all exams will be given through the lock down browser in D2L. Please read the instruction sheet on lock down browser before starting a quiz (located in the syllabus tab)**

Final Exam

The final exam is a comprehensive exam covering all material presented throughout the semester. **Please note Final Exam will be given through the lock down browser in D2L. Please read the instruction sheet on lock down browser before starting a quiz (located in the syllabus tab)**

Extra Credit, Late work, make-up work, tests.

There is no extra credit available for the class. A student will be allow to submit late work, make-up work, or make-up tests in the event of a verifiable illness, family emergency.

D2L Submissions

All assignment submissions made by students in D2L are considered final submissions. It is the student's responsibility to ensure that the correct and complete file has been uploaded. If a student submits an incorrect document, an incomplete draft, or any unintended version, the assignment will be graded as submitted. Students are strongly encouraged to double-check their upload before finalizing the submission.

Additionally, Apple file formats such as .pages or Keynote files will not be accepted. All submissions must be uploaded in Microsoft Office formats—such as .doc, .docx, .ppt, or .xlsx—or as otherwise specified in the assignment instructions.

Attendance Policy

Class attendance is mandatory. More than two (2) unexcused absences from lecture/lab periods will serve to lower a student's grade one letter. Attendance at written examinations is mandatory. Absence without prior approval will result in a grade of zero being recorded for the exam. Medical excuses for illness are allowed. However, all medical excuses for missed class must be written, dated, and signed by the attending MD on the appropriate stationary or Rx pad. The medical excuse must state that you were not to attend class and **with the specific dates of absences noted.** All medical excuses not received on the second day after you return to class will not be allowed.

Classroom Etiquette

Student & professor agree that class time will be dedicated to mutual respect and focus. For example, to avoid distraction cell/mobile phones will be on 'vibrate' mode and placed away (e.g., in backpack) so students and professor can focus on class activities/instruction. (This applies to all electronic devices).

What I expect from you:

- Attend every class meeting
- Come to each class prepared, having done the assigned reading
- Participate in class
- Respect your fellow students and their role in this course
- **ABSOLUTELY NO HEADPHONES/EARBUDS DURING CLASS**

Moffett Library

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

Inclement Weather Policy

In the event of University closure due to inclement weather classes will be held online by zoom meetings. The link for the meeting will be posted to D2L as soon as the closure is announced by the University. The Zoom classroom Policy will be in effect during these sessions. Class attendance during zoom streaming sessions is mandatory, make sure you log in to the class on time. When participating in a Zoom class a student must have their webcam on and point towards themselves (not at the ceiling, floor, dog etc. The instructor should be able to see your full face. Zoom class are conducted just as if you

were in a classroom. You are not in your pajamas, your pets are not an issue, you are in an isolated, quiet setting so you can participate in class. No hats, sunglasses or other distracting materials. All Zoom class sessions will be conducted during normally scheduled class times. Missed Zoom lecture sessions will count towards the absence policy for the class.

Academic Honesty/Dishonesty

Midwestern State University is built upon a strong foundation of integrity, respect, and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated.

Plagiarism is strictly forbidden on any course assignment. (This includes class notes and fellow students work!) All, work, besides your own, should be cited and a reference given. Do not misrepresent any of your efforts on any academic task for which you will receive a grade.

Student Honor Creed

"As an MSU Student, I pledge not to lie, cheat, steal, or help anyone else do so."

As students at MSU, we recognize that any great society must be composed of empowered, responsible citizens. We also recognize universities play an important role in helping mold these responsible citizens. We believe students themselves play an important part in developing responsible citizenship by maintaining a community where integrity and honorable character are the norm, not the exception.

Thus, We, the Students of Midwestern State University, resolve to uphold the honor of the University by affirming our commitment to complete academic honesty. We resolve not only to be honest but also to hold our peers accountable for complete honesty in all university matters.

We consider it dishonest to ask for, give, or receive help in examinations or quizzes, to use any unauthorized material in examinations, or to present, as one's own, work or ideas which are not entirely one's own. We recognize that any instructor has the right to expect that all student work is honest, original work. We accept and acknowledge that responsibility for lying, cheating, stealing, plagiarism, and other forms of academic dishonesty fundamentally rests within each individual student.

We expect of ourselves academic integrity, personal professionalism, and ethical character. We appreciate steps taken by University officials to protect the honor of the University against any who would disgrace the MSU student body by violating the spirit of this creed.

Written and adopted by the 2002-2003 MSU Student Senate.

DEFINITIONS.

A. ACADEMIC DISHONESTY. An action attempted or performed that misrepresents one's involvement in an academic endeavor in any way, or assists another student in misrepresenting his or her involvement in an academic endeavor. Examples of academic dishonesty include, but are not limited

- i. Plagiarism: presenting the work (i.e., ideas, data, creations) of another, wholly or in part, as one's own work without customary and proper acknowledgement of sources and extent of use, unless authorized by the instructor

- ii. Cheating: using information, study aids, notes, materials, devices, or collaboration not explicitly approved by the instructor. For example: doing a class assignment for someone else or allowing someone to copy one's assignment; copying from, or assisting, another student during an examination; or stealing, or otherwise improperly obtaining, copies of an examination before or after its administration.
- iii. Fraud: altering or inventing data, research, or citations for an academic endeavor; fabricating, forging or otherwise misrepresenting to an instructor or an institution one's past or current academic or professional activities; impersonating someone or allowing oneself to be impersonated for an examination or other academic endeavor; using a ghost writer, commercial or otherwise, for any type of assignment.
- iv. Violation of Standards: violations against ethical and professional standards required by individual University programs, academic courses, and clinical programs that may result in qualification for entry into a profession that maintains standards of conduct.
- v. Multiple Submissions: submitting, wholly or in part, the same academic endeavor to earn credit in two or more courses without explicit approval by all concerned instructors.
- vi. Interference/Obstruction: interfering with academic efforts of other students to gain unfair advantage for personal academic advancement. Interference may include but is not limited to, sabotage, harassment, tampering, bribery, or intimidation of another student.
- vii. Complicity: assisting another person in any act of academic dishonesty as defined above.

B. ACADEMIC ENDEAVOR. Any student activity undertaken to earn University credit or meet some other University program requirement. Examples of academic endeavors include, but are not limited to:

- i. Course assignments (written/oral, projects, research, exhibitions of work)
- ii. Exams (written/oral, quizzes)
- iii. Clinical assignments (internships, rotations, practica)
- iv. Presentations (on and off campus)
- v. Publications
- vi. Independent study coursework
- vii. Plan B papers/projects, theses, dissertations
- viii. Student media associated with academic credit

Students are expected to do their own work at all times. This includes all tests, papers, quizzes, projects, reports, and notebooks. Plagiarism of any authors (even fellow classmates) work will not be tolerated.

Copying of materials using a previous student's work, notebook, etc. will not be tolerated. Students who miss class will need to get notes from other students.

HOWEVER, IT IS EXPECTED THAT THIS WORK WILL BE REDONE IN THEIR OWN WORDS. Students using computers, word processors, etc. may not share discs or other materials between each other. To do so will be considered

the same as copying of materials. In all cases students who allow for the copying of materials will be treated just like the student who does the copying.

STUDENTS WHO ARE FOUND TO BE IN VIOLATION OF THIS POLICY WILL HAVE A GRADE OF ZERO RECORDED FOR THE INVOLVED PAPER, TEST, QUIZ, PROJECT, REPORT OR NOTEBOOK. **FURTHERMORE THESE STUDENTS WILL BE REFERRED TO THE APPROPRIATE DEPARTMENT, COLLEGE, OR UNIVERSITY COMMITTEE FOR THE APPROPRIATE DISCIPLINARY ACTION**

Students With Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor. If you have problems while taking an exam, text me immediately. If it is during normal hours I can fix it quickly or if it is in the evening it may be the next day.

Emergency Exit Procedures

In the event of an emergency please evacuate the room in an orderly fashion through the nearest exit. The nearest exit is either through either set of doors at the front of the room. Follow the exit signs to the nearest available exit.

Once exiting the building, please meet your instructor at: across the street from D. L. Ligon in front of the tennis courts.

The fire extinguisher is located immediately outside of the classroom by the door to the left of the podium

MSU Alert

All students are encouraged to participate in the University's emergency warning system "MSU ALERT". Because of this your cell phone should be set to vibrate. If

all of our phones go off at the same time we should take the appropriate action. If your cell phone vibrates by itself please ignore it and continue with class. .

College Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “*Run. Hide. Fight.*” which may be electronically accessed via the University police department’s webpage: [“Run. Hide. Fight.”](#)